Study of Remotely Sensed Ocean Color In The East China And Yellow Seas Using *In Situ* Bio-Optical Data

Charles C. Trees
Center for Hydro-Optics and Remote Sensing
San Diego State University
6505 Alvarado Rd., Suite 206
San Diego, CA 92120
phone: (619) 594-2242 fax: (619) 594-8670 ctrees@chors.sdsu.edu
Grant #: N000149910933
http://www.foundation.sdsu.edu

LONG-TERM GOALS

My long term goal is to characterize relationships between remotely sensed ocean color and vertical profiles of bio-optical properties in the East China and Yellow Seas.

OBJECTIVES

I plan to (1) characterize the vertical distribution of the inherent and apparent optical properties by measuring spectral downwelling and upwelling irradiance, spectral upwelling radiance, spectral beam transmission, and spectral absorption in various bio-optical water masses. From this spectral data, the diffuse attenuation and absorption coefficients, irradiance reflectances, remote sensing reflectances, surface water-leaving radiances and beam attenuation coefficients will be determined, (2) determine the concentration and distribution of the various phytoplankton pigments (Chlorophylls, chlorophyll degradation products, and carotenoids) using a high-performance liquid chromatography (HPLC). In addition, chlorophyll *a* and phaeopigment concentrations will be determined by the standard fluorometric method, providing a direct link to past CZCS pigment algorithms and assisting in SeaWiFS, MODIS and NEMO/COIS derived product comparisons, and (3) establish locally derived, in-water algorithms relating remote sensing reflectance spectra to diffuse attenuation and absorption coefficients and phytoplankton pigment concentrations.

APPROACH

We plan a 7 day cruise on a Chinese research vessel to study the spatial variability of bio-optical properties from the mouth of the Yantzee River to offshore areas. We will sample and study the bio-optical properties of Chinese coastal waters.

WORK COMPLETED

The award was not received by San Diego State University until 14 September 1999 due to an error in the mailing address. There have been no expenditures as SDSU is still in the process of setting up an account for the award.

RESULTS

This project has not started yet.

IMPACT/APPLICATIONS

This project will provide a bio-optical characterization of the S. China Sea, an undersampled region.

TRANSITIONS

None yet.

RELATED PROJECTS

None.